

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended). A method for treating fatty acids comprising:

adding an iodine catalyst to a fatty acid, which contains polyunsaturated components, to form a mixture; heating said mixture to cause conjugation of said polyunsaturated components;

further reacting said mixture under heat with the addition of a ~~material~~ polymerization catalyst to cause polymerization of the conjugated polyunsaturated components to produce a composition containing linoleic dimer/trimer acids and oleic acid;

and recovering oleic acid from said composition.

Claim 2 (original). The method according to Claim 1, wherein said fatty acid includes monounsaturated components such as oleic acid, oleic acid isomers and non-conjugated linoleic acid.

Claim 3 (original). The method according to Claim 1, wherein said fatty acid is selected from the group consisting of tall oil fatty acids, vegetable fatty acids, animal fatty acids and marine fatty acids.

Claim 4 (currently amended). The method according to Claim 1, wherein said iodine catalyst is added in amounts ranging from 0.01 to 0.15% by weight of the fatty acid.

Claim 5 (original). The method according to Claim 1, wherein a co-catalyst is further added to the mixture to enhance the conjugation of said polyunsaturates.

Claim 6 (original). The method according to Claim 5, wherein said co-catalyst is selected from the group consisting of iron complexes or iron powder.

Claim 7 (original). The method according to Claim 6, wherein the co-catalyst is iron (III) chloride added in the range of 0.015 to 0.1% by weight of the fatty acid.

Claim 8 (original). The method according to Claim 6, wherein the co-catalyst is iron powder added in the range of 0.01 to 0.1% by weight of the fatty acid.

Claim 9 (original). The method according to Claim 1, wherein said mixture is first heated to temperatures in the range of 200 to 260°C for up to 6 hours.

Claim 10 (currently amended). The method according to Claim 1, wherein said ~~material~~ polymerization catalyst added to cause polymerization is a clay catalyst present in an amount of 1 to 4.7% by weight of the fatty acid.

Claim 11 (original). The method according to Claim 10, wherein said mixture is further reacted under pressure up to 55 PSI and at temperatures in the range of 170 to 190°C for up to 6 hours.

Claim 12 (currently amended). The method according to Claim 1, wherein said ~~material~~ polymerization catalyst added to cause polymerization is t-butyl peroxide present in stoichiometric amounts to said polyunsaturated components.

Claim 13 (original). The method according to Claim 12, wherein said mixture is further reacted at temperatures in the range of 120 to 135°C for up to 8 hours.

Claim 14 (currently amended). The method according to Claim 1, wherein a further catalyst is ~~further~~ added to said material to enhance polymerization of said conjugated polyunsaturated components.

Claim 15 (currently amended). The method according to Claim 1, wherein said further catalyst is lithium carbonate added in amounts between 0.1 to 0.15% by weight of the fatty acid.

Claim 16 (original). The method according to Claim 1, wherein after said polymerization, said mixture is cooled to at least 130°C.

Claim 17 (original). The method according to Claim 1, wherein phosphoric acid and diatomaceous earth elements are added to said cooled mixture and is then filtered.

Claim 18 (original). The method according to Claim 1, wherein said oleic acid and linoleic dimer/trimer acids are separated from said composition using conventional separation techniques.

Claim 19 (original). The method according to Claim 18, wherein said separation techniques included thin film evaporator or distillation columns.

Claim 20 (original). The method according to Claim 1 wherein, based on the weight of the starting materials, at least 50% or more oleic acid is isolated.

Claim 21 (withdrawn). Oleic acid formed by the method according to Claim 1, wherein the oleic acid has an iodine value in the range of 80 to 100.

Claim 22 (withdrawn). Linoleic dimer/trimer acid formed by the method according to Claim 1.

Claim 23 (withdrawn). A process for isolating oleic acid and producing linoleic acid-based dimer/trimer acids comprising: conjugating polyunsaturated components of fatty acids in the presence of monounsaturated components; and selectively polymerizing said polyunsaturated components to produce the linoleic acid-based dimer/trimer acids.

Claim 24 (withdrawn). The method according to Claim 23, wherein said monounsaturated components included oleic acid, oleic acid isomers and non-conjugated linoleic acid.

Claim 25 (withdrawn). The method according to Claim 23, comprising the further step of separating the linoleic acid-based dimer/trimer acids.

Claim 26 (withdrawn). The method according to Claim 23, comprising the further step of isolating the oleic acid.

Claim 27 (new). The method according to claim 1, wherein the iodine catalyst is selected from the group consisting of iodine element I_2 and iron iodine FeI_2